

Letter to the Editor

## Inactivation of Anti-Aging Genes is Related to Defective Drug Metabolism in Diabetes

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Healthy diets have been encouraged to reverse non alcoholic fatty liver disease (NAFLD) and accelerate hepatic drug metabolism in diabetes. The amount, nature of fat consumed and time of day of fat consumption has become important [1] with relevance to hepatic drug metabolism [2] and the brain regulation of drug transport that may interfere with brain amyloid beta metabolism relevant to Alzheimer's disease and neurodegenerative disease [3]. The understanding the molecular cause of rapid hepatic disease progression involves the nuclear anti-aging genes[4]that determine mitochondria function relevant to dietary fat metabolism. Unhealthy diets that contain bacterial lipopolysaccharides down regulate anti-aging genes [4] with relevance to mitophagy and decreased hepatic drug metabolism [2] that interfere with the circadian regulation of amyloid beta metabolism.

Major interests in caffeine consumption [5] has accelerated with relevance to hepatic caffeine metabolism and interference with brain to liver amyloid beta/drug transport in diabetes and Alzheimer's disease. Healthy diets that activate the anti-aging genes [6] are required to prevent drug-drug interactions [2] with relevance to drug induced mitochondrial toxicity associated with insulin resistance and defective hepatic dietary fat metabolism that promoted NAFLD. Anti-aging gene expression/analysis can be easily conducted on adipocyte analysis [7] to assist with drug therapy in obesity/diabetes. With relevance to drug safety concerns and new drug development specific diets need to be consumed to maintain anti-aging genes that regulate hepatic drug metabolism essential for drug therapy in diabetes and neurodegenerative diseases.

### References

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